

US Serial No. 10/525982
Page 7 of 19

Remarks:

Regarding the amendments to the claims:

The amendments to the claims find support in the specification as filed. New claim 21 finds support at para. [0031] of applicant's published specification.

Regarding the rejection of claims 16, 18-20 under 35 USC 112:

The applicant thanks the Examiner for the withdrawal of the instant rejection.

Regarding the rejection of claim 17 under 35 USC 112, 2nd paragraph:

The amendment to claim 17 entered in this paper is believed to address and overcome the rejection.

Regarding the rejection of claims 1, 4-5, 7-8, 15-18 under 35 USC 103(a) in view of US 2004/0063601 to DeNome (hereinafter DeNome '601):

The applicant respectfully traverses the rejection of the foregoing claims in view of the DeNome '601 reference.

A key basis for the Examiner's rejection is found in the following statement made in the prior *Office Action*, wherein the Examiner contends:

Denome '601 teaches a dosable liquid gel anhydrous organic solvent composition, suitable for dishwashing, which comprises sodium tripolyphosphate hexahydrate and water-soluble dyes (see paragraph [0002] and [0010] on page 1). The anhydrous organic solvent composition comprises an organic solvent composition (wherein "solvent composition" is understood to comprise the organic solvent system and optional additional active ingredients and diluents) and one or more automatic dishwashing detergent compositions (see paragraph [0038] on pages 3-4). The organic

US Serial No. 10/525982
Page 8 of 19

solvent is present at any suitable amount, and is typically present at levels from about 10% to about 80% by weight of the total composition (see paragraph [0039] on page 4). Examples of suitable solvents include (i) alcohols; (ii) amines such as alkanolamines; (iii) esters; (iv) glycol ethers; (v) glycols; and mixtures thereof (see paragraph [0043] on page 4). The organic solvent system is preferably selected from (i) glycol ethers such as ethylene glycol monomethyl ether, propylene glycol butyl ether, among a few; and (ii) glycols; and mixtures thereof (see paragraph [0044] on page 4). The effective amount of water, preferably deionized water, in the anhydrous organic solvent composition is determined by the amount of hydrated builder species to be generated, generally from about 5 to about 10% (underlinings supplied, see paragraphs [0058-0059] on page

In the Examiner's "Response to Arguments", the Examiner notes that para. [0058] – [0059] allegedly teach that the Denome '601 product would contain an amount of water which overlaps with that described by Denome '601. More specifically these paragraphs read:

[0058] The effective amount of water, preferably deionized water, in the anhydrous organic solvent composition of the present invention is determined by the amount of

hydrated builder species to be generated. The uptake of moisture through the water-soluble pouch containing the anhydrous organic solvent composition is related to the amount of water present in the composition itself. For example, anhydrous solvent compositions generally exhibit a higher uptake of moisture than aqueous solvent compositions in water-soluble pouches. Without being bound by any particular theory, it is believed that water transportation through the pouch wall can be driven by a high gradient due to the presence of the source of alkalinity (e.g. carbonate).

US Serial No. 10/525982
Page 9 of 19

[0059] For example, the effective amount of water for the phosphate builder, STPP, is calculated by the following chemical equation: $\text{STPP} + 6\text{H}_2\text{O} \rightarrow \text{STPP} \cdot 6\text{H}_2\text{O}$, wherein the " $\text{STPP} \cdot 6\text{H}_2\text{O}$ " represents sodium tripolyphosphate hexahydrate. For example, if the composition contains 22.37% STPP, the total amount of water needed to convert the STPP to 100% $\text{STPP} \cdot 6\text{H}_2\text{O}$ is 6.57%. Note that some water will come from the stock material. If the stock material is 20% active, then 2.96% water is derived from the stock material alone. The balance 3.61% water will be added to the composition to deliver a product yield value of from about 5 to about 10, generally about 7.

From this foregoing statement, the Examiner then assumes that the Denome'601 product and article render the applicant's claimed invention as obvious. The applicant disagrees.

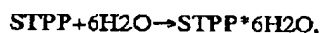
It is asserted that the currently claimed embodiment of the applicant's invention is directed towards a liquid composition, which is clearly flowable within the interior of the water soluble container within which it is presented, as opposed to the thickened gels which are necessarily the result of the process taught by Denome'601. Although the Examiner asserts that Denome'601's comments discuss the presence of "free water", the applicant disagrees and points out that paragraphs [0058] and [0059], and particularly the latter paragraph, particularly teach to one of skill in the art that in preparing the Denome'601 articles that the amount of water present in the film and the amount of water which may be added is only such that the product " $\text{STPP} \cdot 6\text{H}_2\text{O}$ ", viz., sodium hexahydrate, is produced. Sodium hexahydrate comprises only "bound water" and would not render Denome'601's compositions as a liquid. This conclusion is supported by the first sentence of para. [0058] which states "The effective amount of water, preferably deionized water, in the anhydrous organic solvent composition of the present invention is determined by the amount of hydrated builder species to be generated." The penultimate line of para. [0059] which notes "The balance 3.61% water will be added to the composition to deliver a product yield value of from about 5 to 10, generally about 7." This amount of water of 3.61%wt. is the amount of water required, which in addition to

US Serial No. 10/525982
Page 10 of 19

the 2.96%wt. will provide a total of 6.57%wt., which is the stoichometric amount of water specifically required to hydrate the 22.37%wt. of STPP present in the composition. Thus, any water is "bound" water and would not be liquid water as now recited by the applicant's claims.

It is an inescapable conclusion that Denome'601 does *not* teach that there is sufficient water in amounts which would be other than that bound by the STPP. This is reiterated in several places in the Denome'601 published specification, e.g.,:

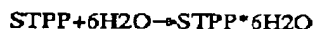
[0035] wherein said effective amount of water is calculated by the following formula:



[0036] and wherein said composition is in the form of a liquid gel.

as well as:

[0022] The first step in this method for manufacture is a pre-hydration step. Water and sodium tripolyphosphate are mixed together in a mix tank to hydrate the STPP and form a hydrated intermediate powder. The amount of water to be added is determined by using the following chemical equation:



[0023] In this case, initially 22.37% STPP is added to a mix tank. The percentage of water can be calculated using the molecular weights of STPP (367.86 g/mol) and water (18 g/mol) in the equation above. The total percentage of water theoretically needed to convert the STPP to 100% STPP·6H₂O is calculated to be about 6.57%. The percentage of water required will depend on whether additional water sources are added to the composition. For example, a stock solution that comprises less than 100% actives will generally provide additional water that must be accounted for in the equation.

US Serial No. 10/525982
Page 11 of 19

The recited "product yield value" is not the amount of available water present, but relates to the property of the liquid gel formed. Thus, the only amount of "liquid water" which may be present is in the amount of 3.61%wt., wherein it forms part of the liquid gel composition.

Thus, while the recitation of the amount of "water" cited by Denome'601 might initially appeared to be relevant to the amounts currently claimed by the applicant, a more careful reading of Denome'601 inevitably leads the reader to understand that that in all instances and embodiments, there is no *liquid water* or "free water" present in the Denome'601 such as is now claimed in the applicant's invention. Indeed, Denome'601 teaches *against* the presence of any excess amount of "liquid water" not bound to an inorganic species in the following excerpt:

storage. Not to be limited by theory, it is thought that the swelling is due to moisture uptake by the anhydrous solvent composition via mass transport through the pouch. Consequently, as water-soluble pouches become swollen they become tight to the touch. Their overall appearance and feel is not appealing to consumers. Thus, there is still the need for a method of manufacturing dosable liquid gel anhydrous organic solvent compositions for cleaning cookware and tableware in automatic dishwashing applications that avoids high yield values and the associated excessive pouch swelling when the compositions are packaged in water-soluble pouches.

[0007] It was surprisingly found that the critical step in avoiding excessive pouch swelling is in the way in which the

Such a recitation is consistent with the following more general recitation of the exact process steps needed to be followed according to Denome'601 which are recited in the following:

US Serial No. 10/525982
Page 12 of 19

[0034] In one non-limiting embodiment of the present invention, a method for manufacturing an organic solvent composition for use in automatic dishwashing, the order of addition for the method for manufacturing comprises the steps of: (a) providing an effective amount of sodium tripolyphosphate (STPP); (b) mixing said STPP and water in a mixer to form a hydrated intermediate powder comprising $\text{STPP} \cdot 6\text{H}_2\text{O}$ such that the phosphate in said hydrated intermediate powder is at least 30% hydrated by weight; (c) providing an effective amount of said hydrated intermediate powder; (d) providing an effective amount of at least one organic solvent; (e) mixing said component(s) of step (d) in solids are hydrated during manufacturing process. If the solids are allowed to dissolve, prior to hydration, they tend to re-crystallize during hydration. The net result is that the yield value of the gel-phase is significantly increased when re-crystallization occurs. XRD analytical data suggests that when hydration is completed in "in-situ" conditions (i.e. water added to the batch as outlined in the order of addition of the examples) the free water tends to bind to the carbonate instead of the phosphate. Consequently, it is believed that re-crystallization is decreased. The order of addition of the method of manufacture of the present invention results in lower yield values of products.

It is important to note that all of his manufacturing processes taught, Denome'601 clearly requires that the (i) amount of water is specifically controlled in order to ensure that at least partial hydration of the sodium tripolyphosphate occurs.

It is quite clear that key features of the Denome'601 specification are both the (a) order of the process steps practiced, as well as the (b) control of the water which is ultimately present within the Denome'601 gel product. Indeed, Denome'601 expressly teaches against the inclusion of any amount of water other than required to hydrate the sodium tripolyphosphate when Denome'601 warns against any deviation from his outlined process steps, including any change in the order of addition of the specific constituents, *inter alia*, in the following excerpted passage:

US Serial No. 10/525982
Page 13 of 19

[0032] Not to be bound by theory, it has been surprisingly found that the same components when prepared in a different order will lead to a product with an unacceptable yield value. For example, if the liquid materials are first mixed together in a mix tank and then the dry materials are subsequently added to the liquid mixture to form an agglomerate. The resulting agglomerate is then recirculated in a dispersion mill mix tank (Union Process Q-Attritor or IKA's Dispax Reactor DRS2000) to reduce the particle size of all the solids to between about 10 and about 70 microns as measured using a Hegman Gauge. After the particle size outlined above is met, the Methocel OS is then added to the dispersion tank and the mix is recirculated through the mill to fully disperse the material. The remaining materials (i.e. adjunct

material) are added to the dispersion tank and recirculated to ensure uniform mixing to finish the product. The composition is allowed to thicken and the recirculation is stopped. The yield value of the resulting composition will be greater than 100 Ps. The finished product will be more a solid than a gel and cannot be easily poured or dosed into a pouching mold or out of a bottle.

Indeed, Denome'601 also cautions that the presence of any amount of water in excess of that specifically required only to hydrate the STTP leads to undesirable "solidification" of the gel product, as is evident from her reading from the following excerpted passage:

[0033] It has also been surprisingly found that even if the method and order of addition is followed as outlined in Example 1, but that a greater amount of water is added to the components than is needed to convert the STTP to 100% STTP*6H₂O according to the equation, then the yield value of the resulting batch will be greater than 100 Pa. The finished product will be more a solid than a gel and cannot be easily poured or dosed into a pouching mold or out of a bottle.

From the foregoing, it is believed to be then made quite clear that a proper reading of the Denome'601 reference leads to the inescapable conclusion that the amount of water is necessarily, very carefully controlled, and takes into account not only the water added during the process/production steps outlined by Denome'601, but necessarily also needs to take into account the amount of water which may be transmitted via the enclosing

US Serial No. 10/525982
Page 14 of 19

water soluble film such that, the presence of any excess of water is avoided, as, any such "excess" of water would only lead to a further solidified the gel product -- and in no way would lead to a flowable liquid present within the interior of the water-soluble "pouch" provided as part of the Denome'601 product.

Denome'601 further teaches, without exception in his specification, that the only solvent present, is his "anhydrous organic solvent composition". Clearly import must be afforded to the word "anhydrous" particularly in view of his recitations at para. [0038] through [0045].

The Examiner is respectfully reminded that with regard to any rejection based on obviousness under 35 USC § 103(b), MPEP section 2143 states that three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. See, *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); *In re Rouffet*, 149 F.3d 1350, 1355-56 [47 USPQ2d 1453] (Fed. Cir. 1998). But see also *KSR International Co. v. Teleflex Inc.*, 82 USPQ2D 1385 (U.S. 2007)

The Examiner is also respectfully reminded that it is impermissible under the law to "pick and choose" amongst related elements of the prior art in order to piece together the applicant's claimed invention. For example, in *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992), the Federal Circuit stated:

"It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). This

US Serial No. 10/525982
Page 15 of 19

court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." (quoting *In re Fine*, 837 F.2d at 1075, 5 USPQ2d at 1600)

In view of the foregoing remarks which clearly distinguish Denome'601, reconsideration of the propriety of the rejection of the indicated claims in view of the DeNome'601 reference, and withdrawal of the rejection is respectfully requested.

Regarding the rejection of claims 10-12, 19 and 20 under 35 USC 103(a) in view of US 2004/0063601 to DeNome (hereinafter DeNome '601), further in view of US 5958858 to Bettiol (hereinafter simply "Bettiol"):

The applicant respectfully traverses the rejection of the indicated claims and view the combined Denome'601 and Bettiol references.

For the sake of brevity, the applicant here and repeats and incorporates by reference to prior remarks made with respect to the purported relevance of the DeNome'601 reference.

The Examiner's rejection states:

It is known from Bettiol to incorporate alkoxyated quaternary ammonium surfactant compounds (see col. 13, lines 34-38) and alkylpolyglycoside nonionic surfactants (see col. 11, line 50+) into a similar liquid dishwashing composition (see col. 43, lines 48-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate alkoxyated quaternary ammonium surfactant and alkylpolyglycoside surfactant into the composition of DeNome '601 because DeNome '601 specifically desires cationic surfactants and nonionic surfactants into his composition and Bettiol teaches such suitable surfactants in an analogous art.

US Serial No. 10/525982
Page 16 of 19

Turning now to the Bettiol document, the compositions of the that prior invention are *necessarily* directed to a detergent composition which includes; (a) 0.1 -20%wt. of a dianionic cleaning agent comprising a structural skeleton of at least five carbon atoms, having at least one anionic substituent group which is a sulfate group and at least one further anionic substituent group which is selected from a sulfate group or a sulfonate group; (b) 0.1 – 50%wt. of a nonionic surfactant; (c) in total, less than about 20%wt. of anionic surfactants; (d) optionally from about 0.1% to about 50% anionic surfactants, and (e) from about 0.1 to about 99.8%wt. of detergent composition adjunct ingredients; were in the ratio of the anionic surfactants to nonionic surfactants plus any optional co-surfactants is from about 1:1 to about 1:10. The presence of an alkoxyated quaternary ammonium surfactant is not a necessary constituent to Bettiol's compositions.

While the Examiner has indicated that the relevance of the Bettiol document is the alleged teaching that the incorporation of alkyl polyglycoside nonionic surfactants with alkoxyated quaternary ammonium surfactant is suggested, the applicant point out that even if a alkoxyated quaternary ammonium surfactant were considered in conjunction with the Denome'601 gel composition, such what not alter the essential characteristics out of the Denome'601 gel composition and it would still remain, at best, a thickened gel composition and would not contain any sufficient amount of *liquid water* or "free water" to render the composition other than a thickened gel. Furthermore, there is nothing within the four corners of the Bettiol reference which teaches utility of the specific combinations of these surfactants, and the expectation that they would not unduly degrade or react with the water-soluble or water dispersible film pouch or container if so formulated.

As such, it is not believe that the Examiner's recitation of the combined Denome'601 and Bettiol references renders the applicant's currently claimed invention as obvious. Accordingly, reconsideration of the propriety of the rejection of the indicated claims, and its withdrawal, is respectfully requested

US Serial No. 10/525982
Page 17 of 19

Regarding the rejection of claims 13-14 under 35 USC 103(a) in view of US 2004/0063601 to DeNome (hereinafter DeNome '601), further in view of US 2002/0142931 to Denome (hereinafter Denome '931)

The applicant respectfully traverses the rejection of the indicated claims and view the combined Denome'601 and Denome'931 references.

For the sake of brevity, the applicant here and repeats and incorporates by reference to prior remarks made with respect to the purported relevance of the Denome'601 reference.

The basis of the instant grounds of rejection are as follows:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare the water-soluble PVA pouch of Denome '601 by injection moulding because Denome '601 desires water-soluble PVA pouch materials of known construction and type as disclosed in paragraph [0134], and DeNome '931 provides such water-soluble pouches prepared by known methods such as injection moulding.

The applicants traverse this ground to rejection lodged by the Examiner due to the fact that, simply stated, there is nothing in the Denome'931 reference concerning its recitation of water soluble polymers which addresses, or overcomes the inherent shortcomings out of the Denome'601 compositions. Indeed, Denome'931 can be seen to suffer the same shortcomings of the Denome'601 compositions in that they too are directed to anhydrous gel compositions which evidently contain only "bound water" and no liquid water. Such is evident from Denome'931 wherein he succinctly recites:

[0012] The compositions herein take the form of an essentially anhydrous gel. By "essentially anhydrous" is meant that they contain less than about 5%, preferably less than about 1% free moisture. Highly preferred, however, are compositions which contain less than about 0.5%, more preferably less than about 0.1% and ever more preferably less than about 0.05% free moisture.

US Serial No. 10/525982
Page 18 of 19

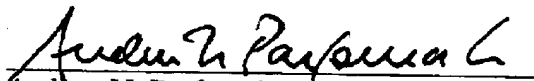
Therefore, at best, any proper consideration of the combined Denome'601 and Denome'931 references does not address or provide any teaching her suggestion whereby the technical shortcomings of the Denome'601 gel compositions discussed *supra*, may be addressed or overcome. Indeed the Denome'931 reference may be considered to be less relevant, or merely cumulative of the Denome'601 reference. It is the applicants view then, that the Examiner's consideration of the Denome'601 and Denome'931 reference is improper and should properly be withdrawn.


In view of the foregoing remarks, reconsideration of the rejections raised by the Examiner is respectfully requested, and early issuance of a *Notice of Allowance* is solicited. Should the Examiner in charge of this application believe that telephonic communication with the undersigned representative would meaningfully advance the prosecution of this application towards allowance, the Examiner is invited to contact the undersigned at their earliest convenience.

CONDITIONAL AUTHORIZATION FOR FEES

Should any further fee be required by the Commissioner in order to permit the timely entry of this paper, the Commissioner is authorized to charge any such fee to Deposit Account No. 14-1263.

Respectfully Submitted;


Andrew N. Parfomak, Esq.
Reg. No. 32,431
Norris, McLaughlin & Marcus, PC
875 Third Avenue, 18th Floor
New York, NY 10022

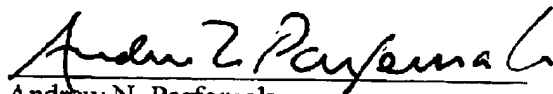

Date:


Tel: 212 808-0700

US Serial No. 10/525982
Page 19 of 19

CERTIFICATE OF TELEFAX TRANSMISSION UNDER 37 CFR 1.8

I certify that this document, and any attachments thereto, addressed to the:
"Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" is being
telefax transmitted to (571) 273-8300 at the United States Patent and Trademark Office.


Andrew N. Parfomak


Date

D:\ANPCMB\102792\250\Amendment04.doc